

**REMARKS**

Claims 1-8, 10, 12-23, 25 and 27-46 are pending in the application. Claims 1, 10, 16 and 25 have been amended and claims 39-46 have been added by the foregoing amendment.

The pending claims stand rejected under 35 U.S.C. § 112 as lacking an antecedent basis for the term “physical channel”. It is believed that this rejection is overcome by the amendment of independent claims 1 and 16.

Applicant requests clarification regarding the status of the drawings in the present Application. In the Office Action Summary, the drawings filed on October 15, 1999 were indicated as being accepted and objected to simultaneously by the Examiner. Since the drawings were not addressed in the Office Action, it is believed that the drawings are acceptable and a notice to this effect is solicited.

Additional clarification is also requested regarding the status of claims 10, 12-15, 25 and 27-34. These claims were not addressed in the Office Action even though they were indicated as being rejected in the Office Action Summary.

Claims 1-8, 16-23 and 35-38 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,323,447 (“Gillis et al.”). Applicant respectfully traverses this rejection and requests allowance of the pending claims in view of the following remarks.

Novel methods and apparatus for selecting a hop channel for use in a channel hopping communication system are disclosed in Applicant’s invention. As recited in claim 1 for example, a method of selecting a hop channel for use in a channel hopping communication system that communicates over a physical channel and includes a sequence of hop channels comprising a set of forbidden hop channels and a remaining set of allowable hop channels

comprises selecting a hop channel from the sequence as a function of a present phase. The selected hop channel is used for communication during the present phase if the selected hop channel belongs to the set of allowable hop channels.

If the selected hopping channel belongs to the set of forbidden hop channels (i.e. of the selected hopping channel does not belong to the set of allowable hop channels), a time-varying parameter is used to select, at the present phase, a substitute hop channel from the set of allowable hop channels, wherein the time-varying parameter is independent of conditions on the physical channel. The substitute hop channel is used for communication during the present phase. A determination as to which hop channel is to be selected from the set of allowable hop channels as the substitute hop channel for the selected hop channel is performed each time the selected hop channel belongs to the set of forbidden channels.

The selection of a substitute hop channel is performed dynamically; that is, there is no predetermined list of substitute hop channels from which to select a substitute hop channel when the selected hop channel belongs to the set of forbidden hop channels.

Gillis discloses a system and method in which a first and a second group of communication channels are generated (col. 2, lines 17-29). If interference is detected during a frequency hopping cycle in one or more of the first group of communication channels, a corresponding number of channels from the second group of channels are substituted for the one or more channels in which interference is detected (col. 2, lines 29-43 and col. 4, lines 9-33).

Additional sets or groups of substitute channels (i.e. in addition to the first and second group such as a “third” group, a “fourth” group, etc.) are also generated. These additional groups are different from the first and second group of channels (col. 10, lines 2 to 22 and Fig. 3).

As the need for substitute channels arises in Gillis, new channels are generated from available channels that have not been used (i.e. unused, available channels). Previously used channels are reused (recycled) only after all unused and available channels are used once as substitute channels.

In contrast to the method of Applicant's invention, Gillis utilizes a pre-determined group (or set or list) of substitute channels. One or more channels from these (second, third, fourth, etc.) pre-determined groups of substitute channels replace channels from the first group in which interference is detected.

Applicant's invention, on the other hand, uses a time-varying parameter to select, at the present phase, a substitute hop channel from the set of allowable hop channels if the selected hopping channel does not belong to the set of allowable hop channels. As such, there is no pre-determined list of channels in Applicant's invention from which to select a substitute channel.

Furthermore, the substitute hop channel is selected from the set of allowable hop channels, using a time-varying parameter at the present phase, in Applicant's invention. Applicant's invention does not require using all unused, available channels prior to reuse as disclosed in Gillis.

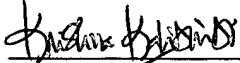
Since Gillis does not disclose each and every element of Applicant's invention as recited in claim 1, Gillis fails to anticipate Applicant's invention. Claim 1 is, therefore, allowable over the teachings of Gillis. Claim 16 is similarly allowable over Gillis.

The remaining claims, all of which depend on one of allowable claims 1 and 16 and cite additional features of Applicant's invention, are also allowable over Gillis.

All of the rejections having been overcome, it is respectfully submitted that this application is in condition for allowance a notice to that effect is earnestly solicited. Should the Examiner have any questions with respect to expediting the prosecution of this application, she is urged to contact the undersigned at the number listed below.

Respectfully submitted,

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